

Go Ahead And Stress

IT'S GOOD FOR YOU – A LITTLE, ANYWAY

Now hear this superintendents: It's OK to stress out about the unwanted *Poa annua* on your course's greens or the grub damage on your course's fairways.

It's OK because stress is good for you, according to a recent study. Yes, we said it's *good* for you.

But there's a catch. Be careful not

to get too stressed, which is not healthy. If you're tearing your hair out, you've gone too far.

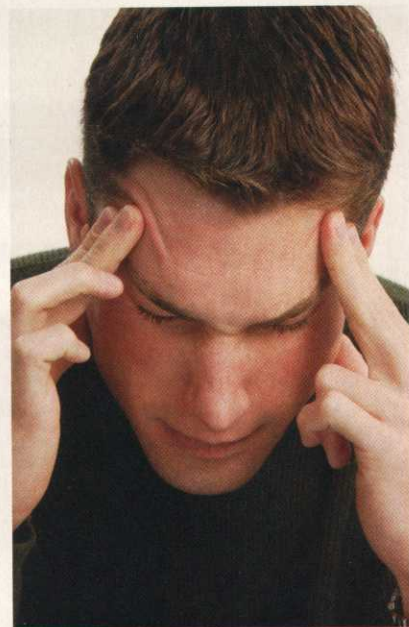
In the study, Northwestern University scientists discovered that elevated levels of special protective proteins that respond to stress in a cell (molecular chaperones) promote longevity.

Acute stress triggers a cascading reaction inside cells that results in the repair or elimination of misfolded proteins, prolonging life by preventing or delaying cell damage, according to the scientists, whose findings were published online Dec. 10 by *Molecular Biology of the Cell*, a publication of the American Society for Cell Biology.

"Sustained stress definitely is not good for you, but it appears that an occasional burst of stress or low levels of stress can be very protective," said Richard I. Morimoto, John Evans professor of biology, who co-authored the paper with lead author James F.

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Morley, a graduate student. "Brief exposure to environmental and physiological stress has long-term benefits to the cell because it unleashes a great number of molecular chaperones that capture all kinds of damaged and misfolded proteins."

Morimoto and Morley studied *C. elegans*, a transparent roundworm whose biochemical environment is similar to that of human beings and whose genome, or complete genetic sequence, is known. In their experiments, the researchers found that when heat shock factor, the master gene that controls the expression of all chaperones, was underexpressed in adult animals, longevity was suppressed. When heat shock factor was overexpressed, lifespan increased. The results suggest that heat shock factor has significant beneficial effects to the organism as a whole.

Past studies have shown that consuming red wine and dark chocolate in moderation can be good for you. Now it appears a little stress is beneficial, too.

— **Newswise**

Industry Loses Two Professionals

Robert Falconer MacNally II, past chairman of the National Golf Foundation and former chairman, president and CEO of Tommy Armour golf company, died in December at 71.

Born April 28, 1932, MacNally was president of Tommy Armour Golf from 1979-95 and chairman from 1995-97. During his tenure, Armour's sales grew from \$10 million to \$100 million. He was co-holder of a patent for the popular Silver Scot 845s irons, originally introduced in 1987. And he was the first to introduce the high-visibility yellow golf ball.

He joined NGF's board of directors in 1979 and was chairman of the board from 1985-86. He retired from the board in 1997 after 19 years of service and was director emeritus at the time of his death.

"Bob was a driving force within the golf industry and within the NGF for many

years," says NGF president and CEO Joe Beditz. "I can't think of anyone who was held in such high esteem by so many within the golf industry or who was so consistently in tune with what is good and right for the growth and enjoyment of the game."

Another industry professional, **James W. Ollerenshaw**, who was employed at The Andersons in Toledo, Ohio, died suddenly on Dec. 24. He was a product manager for the Professional Turf Products Group at The Andersons.

Ollerenshaw, 35, was born in in England and grew up on a dairy farm. He came to the United States in 1987 as a result of a college exchange program between Lancashire College of Agriculture & Horticulture at Hutton in Lancashire, England, The Ohio State University and The Andersons.